IN THE SPECIFICATION

The following are replacement paragraphs.

Page 10, bottom half of page.

C1

DESC1 antisense , D11, 5'-TGCATCAAGCAAACAGTTTATTGAGATC-3' (SEQ. ID. NO. 5);

DESC1 sense, D10, 5'CCTGTTCCCTACACAAATHCAGTAC-3' (SEQ. ID. NO. 6).

Page 12, near bottom of page.

C2

D11, 5'-TGCATCAAGCAAACAGTTTATTGAGATC-3' (SEQ. ID. NO. 5);

D12, 5'TGACTTGGATGTAGACCTCGACCTTCAC-3' (SEQ. ID. NO. 7).

Page 14, top half of page.

Chromosomal Mapping Using a DESC 1 probe.

C3

Chromosomal mapping of DESC1 gene was performed using a Human/Rodent Somatic Cell Hybrid Panel from Oncor, Gaithersburg, MD, with hybridization conditions for DESC1 probe as described above. The DESC1 probe hybridized to only the lane containing human chromosome 4. Chromosomal mapping of DESC1 was additionally performed using the Genebridge 4 Radiation Hybrid Panel (Research Genetics Inc., Huntsville, AL) according to the manufacturer's instructions by PCR amplification using primers D11 and D18, with normal human placental DdnA (Sigma, St. Louis, MO) as template. D18 primer has the following sequence, 5'-GGAATAGTGAGCTCGGGAGATG-3' (SEQ. ID. NO. 8).

Page 14, paragraph at bottom of page and continuing to middle of page 15.

C4

1.0 μg of total RNA was used for first strand cDNA synthesis in a total volume of 25 μl and reactions otherwise performed according to manufacturer's instructions (ProSTAR, Stratagene, La Jolla, CA). PCR amplification was performed in the presence of 2 units of Taq 2000 DNA polymerase (Stratagene, La Jolla, CA), with reaction conditions: 10mM Tris-HCI (pH 8.8), 50 mM KCI, 1.5 mM $MgCl_2$, 0.01% gelatin, 400 nM each primer, 200μM dNTPs, and where appropriate, 0.25μl [α^{32}P]dCTP (3000Ci/mmol) in a final volume of 25μl. Separate reactions were performed for each primer pair with reaction conditions; 96°C 3min followed by 94°C 30s,

55°C 30's, 72°C 1 min for 31 cycles (HPRT) or 33 cycles (DESC1) and a final 5 min extension at 72°C. PCR amplification of full-length DESC1 was performed utilizing the above cycling conditions, with an additional 1 min extension time for each cycle at 72°C, and using the Advantage HF PCR kit (CLONTECH Laboratories Ind, Palo Alto, CA). PCR samples were then run through 22% agarose gels and presence of amplified product and correct product size verified by ethidium bromide fluorescence in the presence of 100 bp size markers (Gibco BRL, Gaithersburg, MD). PCR products generated were then electroblotted using a Bio-Rad Semi-Dri Electroblotter SD and transferred at 12V/110 mA for 10 min. The membrane was removed and exposed to BioMax film (Eastman Kodak, Rochester, NY). Primers utilized in PCR reactions comprise: hypoxanthine phosphoribosyl transferase (HPRT) primers HPt1, 5'-GTAATGACCAGTCAACA-3' (SEQ. ID. NO. 11) and HPRT2, 5'-CCAGCAAGCTTGCGACCTTGACCA-3' (SEQ. ID. NO. 12) and DESC1 primers

D3, 5'-TCACTGTTCATTATGTGAGATATAATCA-3' (SEQ. ID. NO. 9);

D4, 5'-CACCATTGATTCAAGTCTCTGGCTCAT-3' (SEQ. ID. NO. 10);

D10, 5'-CCTGTTCCCTACACAAATGCAGTAC-3' (SEQ. ID. NO. 6);

D11, 5'-TGCATCAAGCAAACAGTTTATTGAGATC-3' (SEQ. ID. NO. 5);

D12, 5'-TGACTTGGATGTAGACCTCGACCTTCAC-3' (SEQ. ID. NO. 7) and

D18, 5'-GGAATAGTGAGCTCGGGAGATG-3' (SEQ. ID. NO. 8).

Page 18, paragraph beginning at middle of page and continuing to page 19.

Example 7

Expression of DESC1 in COS cells, Purification of Recombinant Protein and Assay for Protease Activity

DESC1 full length cDNa was cloned into mammalian expression vector pcDNA4/HisMax (Invitrogen). In this recombinant construct, the DESC1 polypeptide is expressed as a fusion protein with an amino-terminal His tag. DNA was transfected into COS cells utilizing Superfect transfection reagent. 72 hours after transfection, cells were lysed and recombinant DESC1 polypeptide purified utilizing the Xpress protein purification system (Invitrogen) according to the manufacturer's instructions. Purification was accomplished via binding of the His tag to ProBond resin and subsequent elution of the recombinant polypeptide. Protease activity was then tested by incubation of DESC1 recombinant polypeptide in a PepTag Protease Assay. In

this assay, presence of protease activity is demonstrated by proteolysis of small dye-linked peptides. Digestion of the peptides alters the size and charge, and these changes can be detected by agarose gel electrophoresis. DESC1 polypeptide was incubated with PepTag peptide C1, with sequence: Dye-Pro-Leu-Ser-Arg-Thr-Leu-Ser-Val-Ala-Ala-Lys (SEQ. ID. NO. 13). Proteolytic cleavage between the C-terminal lysine and the internal arginine yields fragments with a neutral charge which remain in the well on electrophoresis. Intact peptide has a net positive charge and migrates towards the negative electrode. Protease activity was measured according to the manufacturer's protocol (Promega). The results are shown below and demonstrate proteolytic cleavage of C1 peptide by fractions containing DESC1 polypeptide eluted from the ProBond resin. Results show increasing activity within fractions 1-6, while peptide incubated with elution buffer alone (lane 7) shows no protease activity (peptide intact). Positive control alkaline protease demonstrates protease activity (lane 8) similar to that of DESC1 fractions.